

REMARKS/ARGUMENTS

Upon entry of this reply, claims 21-54 will remain pending with claims 21, 42, 53 and 54 being independent claims.

Reconsideration and allowance of the application are respectfully requested.

Response To Allowable Subject Matter

Applicants express appreciation for the indicated allowable subject matter in claims 39-40 . In particular, claims 39 and 40 are not rejected over prior art, but are objected to as being dependent upon rejected claims.

For the reasons set forth herein, Applicants respectfully submit that each of the pending claims is allowable over the prior art of record. Accordingly, allowance of each of the pending claims is respectfully requested.

Response To Restriction Requirement

Claims 42-52 and 54 are indicated to be withdrawn from consideration as being directed to a non-elected invention, while claims 21-41 and 53 have been examined on the merits. In particular, the Final Office Action asserts that the newly-presented apparatus claims are distinct based upon a method-apparatus restriction as it is asserted that a materially different apparatus can be used to practice the claimed method and said apparatus can be classified in a different class.

In contrast to the assertions in the Final Office Action, Applicants respectfully submit that this application is a national stage application whereby unity of invention rules and

procedures apply. In accordance with unity of invention, the presently pending claims have unity of invention, and are not properly divided. The Examiner is reminded that in order to establish that certain claims are constructively elected, and other claims are constructively non-elected, the Office Action must indicate how the claims are subject to restriction. In the instant situation, the requirement must establish how the claims lack unity of invention under the requirements of 37 C.F.R. 1.475. In this regard, Applicants respectfully submit that even if the claims are considered to be directed to a different invention than originally filed, which they are not, each of the pending claims is examinable together, because unity of invention is present with the claims under examination. In particular, an apparatus and method can be claimed in the same application under the unity of invention rules.

In particular, it is noted that 37 C.F.R. 1.475 states:

§ 1.475 Unity of invention before the International Searching Authority, the International Preliminary Examining Authority and during the national stage.

(a) An international and a national stage application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept ("requirement of unity of invention"). Where a group of inventions is claimed in an application, the requirement of unity of invention shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.

(b) An international or a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combinations of categories:

- (1) A product and a process specially adapted for the manufacture of said product; or
- (2) A product and process of use of said product; or
- (3) A product, a process specially adapted for the manufacture of the said product, and a use of the said product; or

(4) A process and an apparatus or means specifically designed for carrying out the said process; or

(5) A product, a process specially adapted for the manufacture of the said product, and an apparatus or means specifically designed for carrying out the said process.

(c) If an application contains claims to more or less than one of the combinations of categories of invention set forth in paragraph (b) of this section, unity of invention might not be present.

(d) If multiple products, processes of manufacture or uses are claimed, the first invention of the category first mentioned in the claims of the application and the first recited invention of each of the other categories related thereto will be considered as the main invention in the claims, see PCT Article 17(3)(a) and § 1.476(c).

(e) The determination whether a group of inventions is so linked as to form a single general inventive concept shall be made without regard to whether the inventions are claimed in separate claims or as alternatives within a single claim.

In the instant situation, the claims are directed to a process and an apparatus or means specifically designed for carrying out the said process under 37 C.F.R.

1.475(b)(4) so that this national stage application is considered to have unity of invention.

The Examiner is reminded that in accordance with Patent and Trademark Office procedure, when making a lack of unity of invention requirement, the examiner must (1) list the different groups of claims and (2) explain why each group lacks unity with each other group (i.e., why there is no single general inventive concept) specifically describing the unique special technical feature in each group. In the present situation, the Final Office Action does not provide this listing of claims, and does not explain why each group lacks unity with each other group.

Moreover, for the reasons set forth in Applicants' Amendment Under 37 C.F.R. 1.111, filed October 29, 2004, Applicants respectfully submit that the apparatus claims were pending when a first action on the merits was prepared.

Applicants note the remarks concerning a drawing and submit that a drawing is not necessary to understand the claimed apparatus. However, Applicants submit herewith a figure of drawings (Attachment 1) to further assist the Examiner's understanding of the apparatus claims. In this regard, Applicants submit that drawings are not needed in the instant situation (i) to overcome any insufficiency of the specification due to lack of an enabling disclosure or otherwise inadequate disclosure therein, or (ii) to supplement the original disclosure thereof for the purpose of interpretation of the scope of any claim. If the Examiner deems appropriate for examination of the apparatus claims, Applicants will add the figure to the specification.

To assist the Examiner's review of the drawings, Applicants note that in the figure, the reference numerals are as follows:

- 1 Air inlet
- 2 Entry of the waste gas with or without solid waste products
- 3 Discharge of the dried, separated, classified and decomposed products
- 4 Gas outlet

In view of the above, Applicants respectfully request a complete action on the merits of each of the pending claims because unity of invention is present. Moreover, Applicants respectfully request withdrawal of finality of the Office Action.

Response To Rejections

The following rejections set forth in the Final Office Action as follows:

(a) Claims 21-25, 27-32, 38, 41 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Uemura et al. (hereinafter "Uemura"), U.S. Patent No. 4,308,806, or under 35 U.S.C. 103(a) as being unpatentable over Uemura in view of Sawai, JP '01239309 A.

(b) Claims 24, 26 and 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uemura in view of Sawai, JP '01239309 A, and further in view of what the Examiner considers to be well known in the art, as presently demonstrated by Miyoshi, U.S. Patent No. 6,321,540.

In these grounds of rejection, it is alleged that Uemura shows a substantially tangential supply of waste gases and an axial supply of air. The rejections contend that in Figure 3 of Uemura the flow pattern would be substantially tangential. Moreover, regarding solid discharge, the rejection contends that the discharge pipe 25 of Uemura would remove solids in a manner similar to that claimed by Applicants.

In response to these grounds of rejection, Applicants note that independent claim 21 is directed to a process for drying, separating, classifying, and decomposing waste products from at least one of a waste degassing and gasification process, comprising introducing solid waste products and waste gases wholly or partially in a funnel-shaped lower part of a shaft-shaped chamber, and at least one of simultaneously and subsequently introducing air and the waste gases from the degassing and/or gasification process separately into the chamber from below under pressure, the air is introduced into

the chamber substantially axially and the waste gases are introduced into the chamber substantially tangentially, resulting in a rotationally symmetrical, fountaining eddying of the solid and gaseous substances in the chamber, and, subsequently or during continuous processing, dried, separated, classified, and substantially decomposed products are downwardly discharged from the chamber.

Moreover, independent claim 53 is directed to a process for drying, separating, classifying, and decomposing waste products from at least one of a waste degassing and gasification process, comprising introducing solid waste products and waste gases wholly or partially in a funnel-shaped lower part of a shaft-shaped chamber, and at least one of simultaneously and subsequently introducing air and the waste gases from the degassing and/or gasification process separately into the chamber from below under pressure, the air is introduced into the chamber substantially axially and the waste gases are introduced into the chamber substantially tangentially or radially, resulting in a rotationally symmetrical, fountaining eddying of the solid and gaseous substances in the chamber, and, subsequently or during continuous processing, dried, separated, classified, and substantially decomposed products are downwardly discharged from the chamber.

In contrast to Applicants' claimed process, the solids in Uemura are introduced above the conical area of the chamber and brought in a swirling state through pressurized oxidizing gas from the conical area of the container. Thereby, the oxidizing gas can be partly replaced by recycled combustion gas. Moreover, in Uemura, the discharge of solid

and gaseous products takes place exclusively via an outlet opening in the upper area of the chamber.

According to Applicants' invention, solid waste products from a degassing and/or gasification process can be introduced into the chamber from above or together with the waste gases. Jointly introducing solid and gaseous waste products from a degassing and/or gasification process is not possible with Uemura. In particular, Uemura does not disclose, as recited in Applicants' claims, a process for drying, separating, classifying, and decomposing waste products from at least one of a waste degassing and gasification process which includes introducing solid waste products and waste gases wholly or partially in a funnel-shaped lower part of a shaft-shaped chamber as recited in Applicants' claims.

The Examiner is reminded that each feature recited in Applicants' claims must be shown in the prior art. In this regard, the claims under prosecution are directed to processes for drying, separating, classifying, and decomposing waste products from at least one of a waste degassing and gasification process. The rejections of record must establish that such processes are disclosed in the prior art. Moreover, the rejection must establish that the prior art teaches or suggests each of the process steps recited in Applicants' claims.

Furthermore, according to the present invention, air and waste gases (with or without solids) are introduced into the chamber separately from below. Thus, amongst other recitations in Applicants' claims, Uemura does not disclose at least one of simultaneously and subsequently introducing air and the waste gases from the degassing

and/or gasification process separately into the chamber from below under pressure. In contrast, if recycled combustion gases are used with Uemura, then these gases are always fed together with the oxidizing gas, both tangentially and radially.

With the present invention, air is introduced into the chamber substantially axially. In contrast in Uemura, the oxidizing gas is introduced both axially and radially.

Furthermore, in Applicants' independent claim 21, the waste gas (with or without solids) is introduced tangentially, and in independent claim 53, the waste gas (with or without solids) is fed tangentially or radially. In Uemura, the oxidizing gas together with partly recycled combustion gas can be introduced only axially and radially. In this regard, Uemura is being utilized in the rejections in an attempt to show a tangential supply of waste gases and an axial supply of air. However, while it appears that Uemura discloses axial supply of air through 19, Uemura does not appear to show a tangential supply of waste gases. In this regard, even if it is found that waste gases can be supplied through 14, 16 of Uemura such nozzles 16 appear to circumferentially feed the gas in a radial and not tangential direction. Uemura specifically discloses at column 4, lines 60-64, that, "The nozzles 16 formed in the perforate plate 14 are horizontally disposed in the circumferential direction of the perforated plate 14. However, the nozzles may be disposed with each having a slight upward inclination to obtain upward swirling."

Moreover, with Uemura, merely recycled combustion gas can be reintroduced into the process. Uemura expressly states (column 9, beginning at line 45) that the combustion gas is subjected to solid separation. In the case of the present invention, this is not

necessary and also not possible. Typically, the waste product of a degassing and/or gasification process is a waste gas with solid particles.

It is further noted that the source materials used in the present case (waste products from a degassing and/or gasification process) are different from those used with Uemura for the partial replacement of the oxidizing gas. Uemura states expressly, as can be seen, for example, in claim 4 of Uemura, that recycled combustion gases are reused. The composition of these two waste products is thus totally different as well, since in particular with Uemura hydrocarbons are no longer available and are not reused.

Furthermore, according to the present invention, the solid products from the drying, separating, classifying and decomposing process are discharged downward. According to Uemura, combustion residual products are discharged via the lower discharge opening. The fact that Figs. 1, 2 and 4 of Uemura also display a valve at the end of this pipe makes it clear that it cannot merely be solids that are to be discharged here. Uemura does not disclose a process for drying, separating, classifying, and decomposing waste products from at least one of a waste degassing and gasification process, including amongst other features, subsequently or during continuous processing, dried, separated, classified, and substantially decomposed products are downwardly discharged from the chamber.

Therefore, Applicants respectfully submit that Uemura does not teach each and every feature of Applicants' claims under rejection.

Sawai is utilized as an alternative obviousness rejection in an attempt to establish that it would have been obvious to modify the invention of Uemura by introducing exhaust gas into said chamber for a more efficient waste handling process.

However, whether or not one having ordinary skill in the art would have been modified to combine Uemura and Sawai, Applicants' invention would not be at hand for at least the reasons noted above.

Moreover, the rejection of claims over well known features in the prior art as demonstrated by Miyoshi is not a proper rejection. In this regard, the rejection does not establish motivation for modifying an asserted combination of Uemura and Sawai with the disclosure of Miyoshi. Moreover, even if the disclosures were combined, there is no motivation for at least one of preheating and introducing into the chamber air under a pressure of 6-8 kPa; or introducing waste gases into the chamber under a pressure of 6-8 kPa.

In view of the above, the rejections of record should be withdrawn, and all of the pending claims indicated to be allowable as none of the prior art of record whether taken alone or in combination teaches or suggest a process for drying, separating, classifying, and decomposing waste products from at least one of a waste degassing and gasification process.

CONCLUSION

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the objections and rejections of record, and allow each of the pending claims.

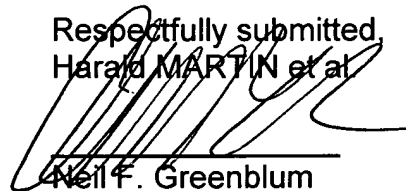
Applicants therefore respectfully request that an early notification of allowance of the application be indicated by the mailing of the Notices of Allowance and Allowability.

P21939.A09

Application No. 10/030,178

Should the Examiner have any questions regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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ATTACHMENT 1

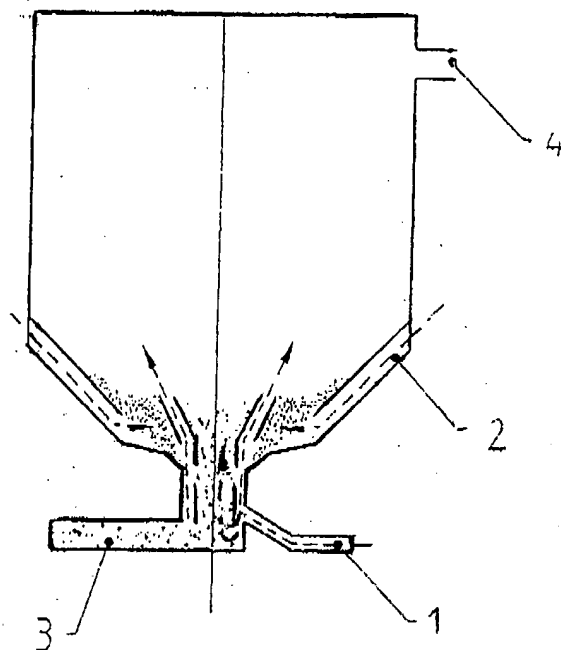


Fig. 1